32X Sound Simulator
Ver. 1.00

Table of Contents

Overview and Glossary

The 32X Sound Simulator is a tool that transfers the sound data created using the Tone Editor 32X to the CartDev and that performs an emulation. Therefore, before the Sound Simulator is started, the data creation using the Tone Editor 32X must be complete. The following description of the 32X Sound Simulator, with reference to sample data "Proj1", assumes that the necessary data creation tasks have been completed.

The development of any sound package presumes that the package will be incorporated into a game cartridge. Therefore, ultimately all sound data must be integrated. The goal is to create a single sound object. The integrated, final output file is referred to as a "bulk file". The sound development process is complete when the bulk file is incorporated into a game.

Icon for a bulk file

The following illustrates the basic screen, called the Edit window, for the Sound Simulator. The data files created using the Tone Editor 32X are mapped onto the Edit window. How to perform mapping will be explained later.

The Sound Simulator keeps track of the modules loaded in memory in terms of the numbers that appear in the leftmost column in the Edit window. Modules are displayed on the Edit window on a line-by-line basis. Each line is called a block.

Edit window -- Untitled

CRNT 0 No name

No	Start – End	Size	Data		File name
01	000000-002107	002108	ROMTopSys0	-	
02	010000-012E4D	002E4E	Snd DRVR0	-	
03	012E4E-012E75	000028	DRVR Ptr0	-	

Activation Method

When using the 32X Sound Simulator for the first time, click on the 32xSndSim option in order to effect the condition in which the New option is automatically selected from the file menu (see the "New" option in "1. File"). If a task has been completed previously and the Edit window has been saved, a project file is already available. In this case, the task can be resumed by clicking on the project file.

32xSndSim   Icon for a project file

Mapping

"Mapping" refers to the task by which sound files containing various elements are allocated to memory. Game producers must keep track of the sequence in which files are allocated, and the sizes of bulk files. All other memory management functions are performed by the Sound Simulator.

The following describes how to perform actual mapping using sample data in order to create a bulk file.

The files indicated below, all of which are created using the Tone Editor 32X, are contained in the supplied sample data. The file for MIDI setting is not required for the Sound Simulator.
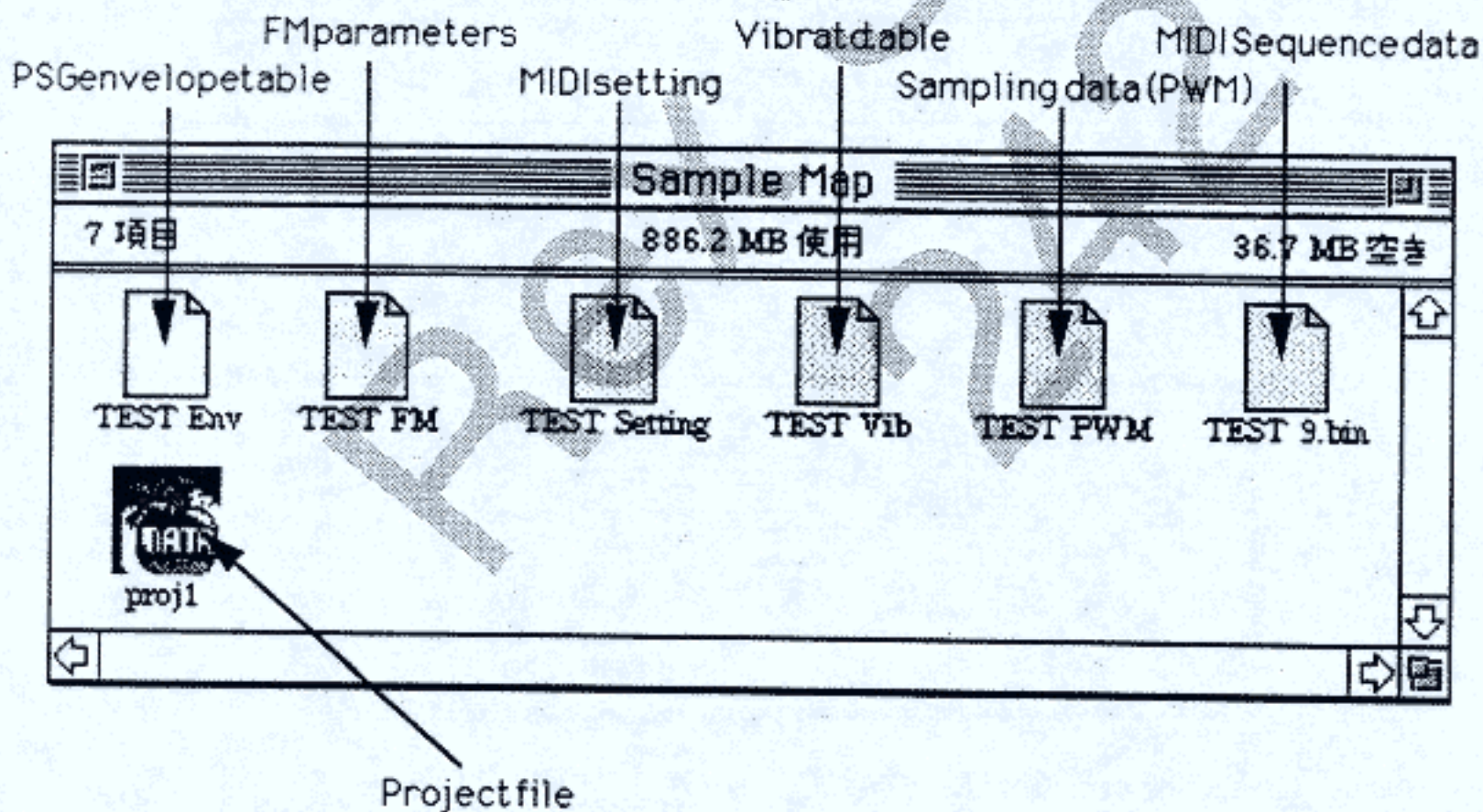
First, we link the following files in the indicated order: Sequence data, Fm parameters, Vibrato table, PSG envelope, and Sampling data (PWM). The Edit

3

window contains the image of a memory mapping on a cartridge. This image contains the addresses beginning with address 0 of the ROM cartridge, and items that are necessary for running 32X software, including vector information and a boot-up program. Therefore, the Sound Simulator also requires the items necessary for running the 32X, as separate from sound data. The Edit window displays these required items. In the table shown below, the item "ROMTopSys0" corresponds to the required items.

The item "Snd DRVR0" represents the Sound Driver. By default, the Sound Driver is allocated at address 0x20000. An address must be set whenever a new project is commenced. (See the "New" option in "1. File".)

The item "DRVR Ptr0" holds the address information necessary for linking blocks. This is a reserved area that stores information on the blocks that have been linked.

01	000000-002107	002108	ROMTopSys0	-	
02	020000-022E4D	002E4E	Snd DRVR0	-	
03	022E4E-022E79	00002C	DRVR Ptr0	-	

The above three modules are required modules; they exist independently of the project file. Consequently, actual mapping is performed beginning with the fourth block from the top. Therefore, select the "New" option from the menu bar. The fourth block appears:

01	000000-002107	002108	ROMTopSys0	-	
02	010000-012E4D	002E4E	Snd DRVR0	-	
03	012E4E-012E75	000028	DRVR Ptr0	-	
04	012E76-012E76	000000	Seq Vector0	B	

Double-clicking on the fourth block brings up the following dialog box:

```
Start point  012E76      Data type              Cancel

Size         000000          Sequence           Done

Load file                            File size    ------

Autoload     □       File type       ⦿ Binary
                                     ○ S-Format
                                     ○ HexFormat
```

Because the sequence data is the first item to be linked, drag the cell indicated by "Data type", and select the "Sequence" option from the popup menu.

Data type pop-up menu

Select "Sequence".

DataType
PCM Data
PWM Data
Sequence
SE
PSG Envelope
Vibrate
FM Drum Kit
FM Data

Then, click on the "Load file" item in order to bring up the following dialog box. Select the sequence data file "test9.bin" from the dialog box:

Sample Map ▼   Macintosh HD

D proj1
D TEST 9.bin
D TEST Env
D TEST FM   Desktop
D TEST PWM
D TEST Setting   Cancel
D TEST Vib
                   Open

The file "test9.bin" is now mapped to the fourth cell.

01	000000-002107	002108	ROMTopSys0	-	
02	010000-012E4D	002E4E	Snd DRVR0	-	
03	012E4E-012E75	000028	DRVR Ptr0	-	
04	012E76-012E76	000000	Seq Vector0	B	test 9.bin

The current block is displayed in reverse video, indicating that the block is available for editing. Since the purpose now is to map the next FM timbre data, click on this block in order to cancel the reverse video display.

01	000000-002107	002108	ROMTopSys0	-	
02	010000-012E4D	002E4E	Snd DRVR0	-	
03	012E4E-012E75	000028	DRVR Ptr0	-	
04	012E76-012E76	000000	Seq Vector0	B	test 9.bin

Repeat the above procedure to effect the following mapping:

```
┌──────────────── Edit window -- Untitled ────────────────┐ ⬆
│  CRNT  O   No name                                      │
│ No    Start  - End     Size    Data          File name  │
│ 01   000000-002107    002108   ROMTopSys0  -            │
│ 02   010000-012E4D    002E4E   Snd DRVR0   -            │
│ 03   012E4F-012E75    00002B   DRVR Ptr0   -            │
│ 04   012E76-0130F7    000282   Seq Vector0 B  TEST 9.bin│
│ 05   0130F8-013D77    000C80   FM Data0    B  TEST FM   │
│ 06   013D78-01BD77    008000   Vib Table0  B  TEST Vib  │
│ 07   01BD78-023D77    008000   PSG Env0    B  TEST Env  │
│ 08   023D78-045373    0215FC   PWM Data0   B  TEST PWM  │
│                                                         │
│                                                         │
│                                                         │
│                                                       ⬇ │
│                                                       ▣ │
└─────────────────────────────────────────────────────────┘
```
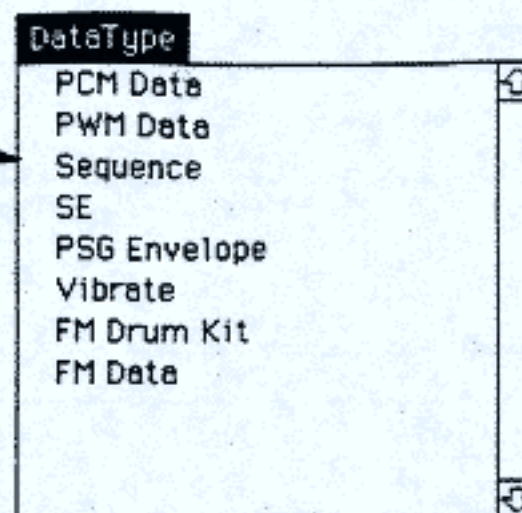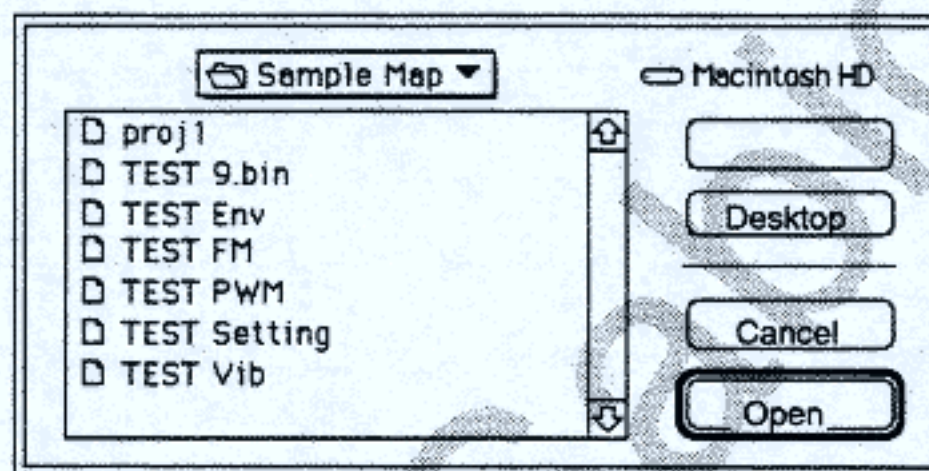
No	Start - End	Size	Data		File name
01	000000-002107	002108	ROMTopSys0	-	
02	010000-012E4D	002E4E	Snd DRVR0	-	
03	012E4F-012E75	00002B	DRVR Ptr0	-	
04	012E76-0130F7	000282	Seq Vector0	B	TEST 9.bin
05	0130F8-013D77	000C80	FM Data0	B	TEST FM
06	013D78-01BD77	008000	Vib Table0	B	TEST Vib
07	01BD78-023D77	008000	PSG Env0	B	TEST Env
08	023D78-045373	0215FC	PWM Data0	B	TEST PWM

This completes the mapping. The results of the mapping are stored in the "proj1" file. See the "Save" option in "1. File" for a description of how to save files.

In the next step, verify that the data in the project file is correctly played back.

First, execute the "Load all files" item in "1. File". A "Write memory/w xxxxx to xxxxx" display on the TV monitor indicates that the execution is successful, and that sound data has been loaded onto the CartDev's emulation memory.

Next, execute the "Start sound driver" option in "3. Systems". This starts up the Sound Driver. Now, wait for a request.

The request method to be employed is the "Music test" option in "3. Systems". Execute the request number 01H.

The music must have been performed flawlessly. At this point, the program creates a bulk file and is completed. Bulk files are created using the "Link all files" option in "1. File".
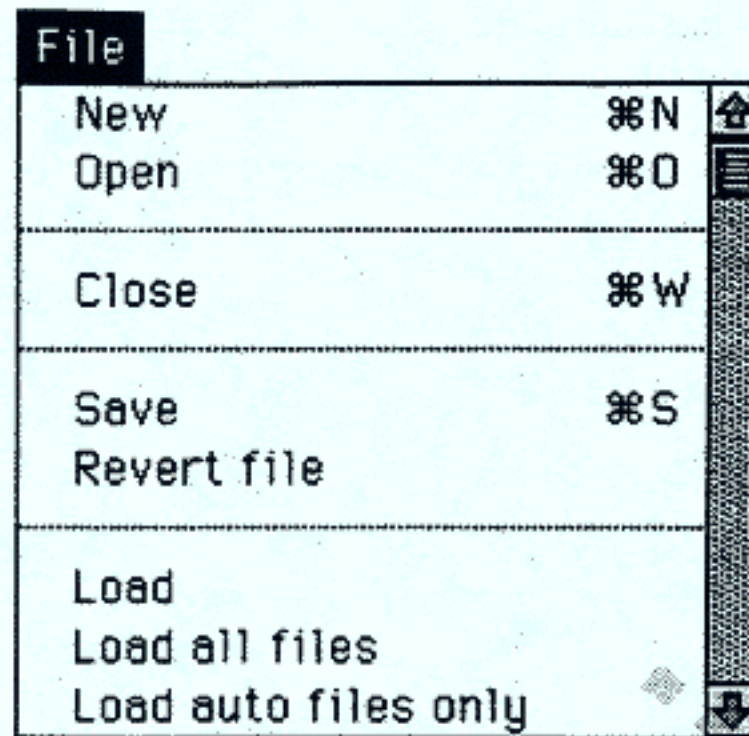
Detailed Description of Functions

The menu bar for the Sound Simulator contains six menus. In the following, the menus are explained in the order in which they appear in the menu bar:
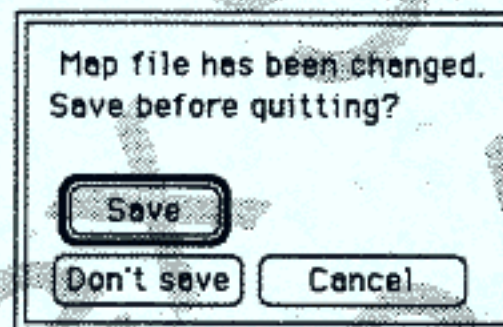
 File Edit Systems Map Display Function

1. File

```
┌─────────────────────────────────┬───┐
│ File                            │ ▲ │
│   New                      ⌘N   ├───┤
│   Open                     ⌘O   │ ▤ │
│ ─────────────────────────────── │   │
│   Close                    ⌘W   │   │
│ ─────────────────────────────── │   │
│   Save                     ⌘S   │   │
│   Revert file                   │   │
│ ─────────────────────────────── │   │
│   Load                          │   │
│   Load all files                │   │
│   Load auto files only          │ ▼ │
└─────────────────────────────────┴───┘
```

The file menu provides a user-friendly interface for the use of the file-related functions currently supported by the Sound Simulator.

New

This option creates a new map. If a map is being produced, the program asks the user whether or not the current data is to be saved before a new map is opened.

```
┌───────────────────────────────┐
│  Map file has been changed.   │
│  Save before quitting?        │
│                               │
│      ┌──────────────┐         │
│      │    Save      │         │
│      └──────────────┘         │
│  ┌────────────┐ ┌──────────┐  │
│  │ Don't save │ │  Cancel  │  │
│  └────────────┘ └──────────┘  │
└───────────────────────────────┘
```

When a new map is to be created, the dialog box indicated below appears, and the program asks whether a 32X emulation map or a Sound editor map is to be created. When so prompted, set the following three parameters: sound driver address, amount of song, and amount of S.E.

```
┌─────────────────────────────────────────┐
│ ┌───────────────────────────────────────┐ │
│ │  When saving a map for the first      │ │
│ │  time, the rules, found below, apply. │ │
│ │                                        │ │
│ │  Sound driver address  ┌──────────┐   │ │
│ │                        │          │   │ │
│ │  Amount of Song        ├──────────┤   │ │
│ │                        │          │   │ │
│ │  Amount of S.E.        ├──────────┤   │ │
│ │                        └──────────┘   │ │
│ │       ┌──────────────────────┐        │ │
│ │       │  32X emulation map   │        │ │
│ │       └──────────────────────┘        │ │
│ │  ───────────────────────────────────  │ │
│ │       ┌──────────────────────┐        │ │
│ │       │    Sound editor      │        │ │
│ │       └──────────────────────┘        │ │
│ └───────────────────────────────────────┘ │
└─────────────────────────────────────────┘
```

To create a new map, set the indicated parameters.

Sound Driver address

When creating a map, specify the location in which the Sound Driver is to be stored. In the final sound data file, to be incorporated into a game, its starting address coincides with the starting address of the Sound Driver. Therefore, it is critically important to determine the correct storage location for the Sound Driver.

Because it is relocatable, the Sound Driver can be allocated to any address. However, it should not overlap with the 68000 system, which is composed of programs that process vectors and the commands that are issued by the Macintosh. The area from 0x000000 through 0x002FFF is reserved for the system. Therefore, do not allocate the Sound Driver to any address that overlaps with this area.

Amount of Song, Amount of S.E.
In these parameters, enter the total number of BGMs and sound effects. If the total is not known, enter an appropriate numerical value, which can be modified later on.

After completing the above setup, click on the 32X emulation map. Use the Sound Editor when loading an old developmental tool. Since old developmental tools are not supplied by SEGA, usually it is not necessary for the user to select the Sound Editor menu.

Open

This option is used to open an existing project file. After opening a project file, this menu transmits the file (ROMTopSys) whose block-0 auto-transmission option has been checked off, and resets the 32X.

Close

This option closes the current project file. If there has been a change in the map, the program asks whether or not the project file is to be saved before it is closed. This menu does not terminate the tool.

Save

This option saves the current project file. If an existing file has been modified, the save menu option automatically overwrites the existing file. If a new map is to be saved, the save menu option prompts for a save destination. If a transmitted file has been changed or moved and the associated alias information has been updated, the save confirmation dialog box appears even when no changes have been made to the file.

Revert file

This option allows the user to save a project file under a different name.

Load

This option transmits the file containing a specified block in the map being edited, and resets the 32X.

Load all files

This option transmits the project file (the entire file for the map being edited), and resets the 32X. If a file does not exist, the option still attempts to transmit it. In this case, an error will be returned (Version 10/27).

Load auto files only

This option only transmits files whose auto transmission option is checked off ("auto load files"), and resets the 32X.

An auto load file refers to the file that is always loaded when loading is specified for a block with which the file is associated. Auto load files are user-specified.

To specify an auto load file, click on the Auto Load option on the dialog box that appears when the desired block is double-clicked. Clicking on the Auto Load option causes the system to recognize the auto load file.

Click on this space.
The resulting check-marked file
is an auto load file.

Start point	012E76	Data type		Cancel
Size	000000	Sequence		Done
Load file		File size	-----	
Autoload	☑	File type	⦿ Binary	
			○ S-Format	
			○ HexFormat	

10
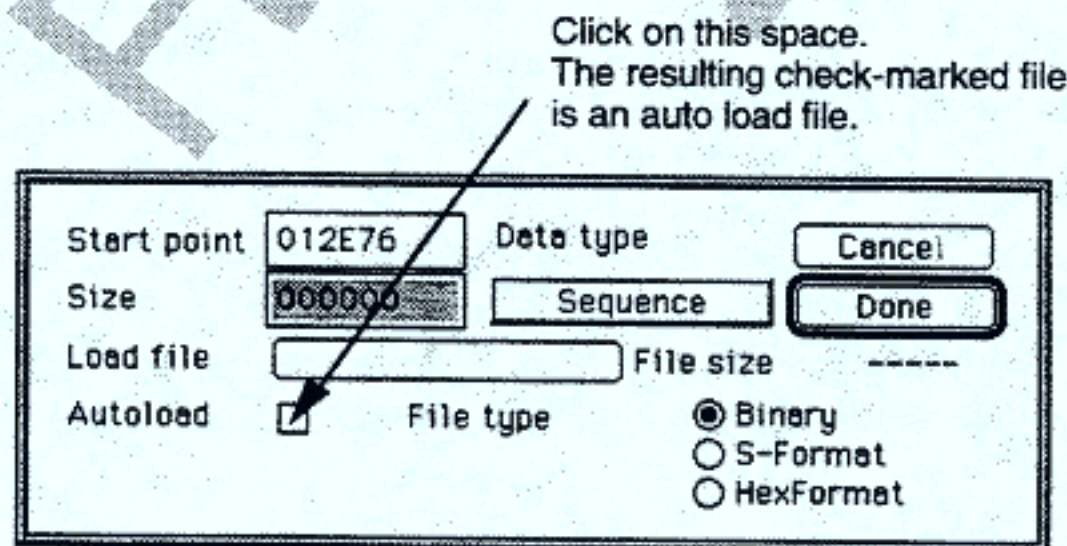
After transmitting a file, the Sound Driver always creates the pointers that it uses. Only the "Load all files" option can transmit the Sound Driver.

Caution!

When using the "Load files" or "Load auto files" option, make sure that the transmission address and the transmission size have not been modified. Even when either the transmission address or the transmission size has been changed, the transmission produces the correct results if, fortuitously, the blocks of the transmitted file do not overlap with the addresses of other blocks. Normally, however, such a transmission results in the destruction of memory contents.

Link all files

This option creates a bulk file, and is used at the final stage of a sound development.

Link auto load files

This option only links the file that specifies an auto-load file and creates a bulk file. The bulk file is saved beginning at the address 0. Any unused portions of the blocks in which an auto transmission setting is not provided are filled with the data 0x00.

Quit

This option frees any used memory and terminates the Sound Simulator. If there is a project file being created, the user is prompted with the question of whether or not the file is to be saved. When quitting the Sound Simulator, always perform the termination action from this menu item.

2. Edit

```
┌─────────────────────────────┐
│ Edit                        │
│  Edit data                  │
│ ─────────────────────────── │
│                             │
│  New                        │
│  Change map name            │
│ ─────────────────────────── │      ┌──────────────────────────┐
│                             │      │                          │
│  Delete            ⌘X       │      │  New map                 │
│  Copy              ⌘C       │      │ ──────────────────────── │
│  Paste             ⌘V       │      │                          │
│  Insert            ⌘I       │      │  Delete map              │
│  Clear data                 │      │  Copy map                │
│                             │      │  Insert map              │
└─────────────────────────────┘      │  Paste map               │
                                     │  Clear map data          │
                                     └──────────────────────────┘
```

The edit menu allows the user to perform deletion, addition, pasting, and insertion operations on a project file. To perform an operation on a block, select the desired block in the Edit window. To perform an operation on an entire project file, select the desired project file from the *map* menu in the menu bar.

Edit data

This option allows the user to rewrite information in the current block. This menu option, which can be used to move the address of the current project file, automatically relinks the project file so that the file's blocks will not overlap any of the previously set sizes and starting addresses. Notice, however, that if the results of relinking are set at incorrect addresses, the program does not raise an error. On the other hand, in some cases the absence of error conditions can be beneficial.

```
┌──────────────────────────────────────────────────────────┐
│  Start point  [Hex  ]     Data type        [ Cancel ]    │
│  Size         [Hex  ]     [████████████]    [ Done   ]    │
│  Load file      [ Load File ]  File size     000000      │
│  Autoload    ☐    File type    ○ Binary                  │
│                                ○ S-Format                │
│                                ○ HexFormat               │
└──────────────────────────────────────────────────────────┘
```

This menu can also be invoked by double-clicking on the Edit window.

```
┌─────────────┐
│ DataType    │
├─────────────┤
│  PCM Data   │
│  PWM Data   │
│  Sequence   │
│  SE         │
│  PSG Envelope│
│  Vibrate    │
│  FM Drum Kit │
│  FM Data    │
└─────────────┘
```

The blocks indicated below are controlled by the system, and are not available for editing by users. If the area of another block that is being modified overlaps with any of these blocks, the system does not move the starting addresses of the affected blocks. These three special blocks are called "system blocks".

Area in which the system components to be transmitted by means of a sound driver map are stored.

Block in which the Sound Driver is located.

Block in which the pointers required by the Sound Driver are stored.

01	000000-000000	000000	ROMTopSys0	-
02	000000-000000	000000	Snd DRVR0	-
03	000000-000000	000000	DRVR Ptr0	-

New

This option adds a new block to the Edit window. If there is a selected block (reverse-displayed block), the new block is inserted immediately above that block.

Change map name

This option renames the current project file.

Delete

This option deletes a specified block. The "Delete and rejoin" option moves up the trailing blocks after deleting a block, so that there are not gaps in memory.

```
┌─────────────────────┐
│ Delete selected     │
│ block?              │
│ ┌─────────────────┐ │
│ │     cancel      │ │
│ └─────────────────┘ │
│ ┌─────────────────┐ │
│ │ Delete and rejoin│ │
│ └─────────────────┘ │
│ ┌─────────────────┐ │
│ │   Delete only   │ │
│ └─────────────────┘ │
└─────────────────────┘
```

Copy

13

This option copies a specified block without copying the block's starting address or size.

Paste

This option overwrites (pastes) onto a specified block the block that was copied through the copy menu. If a destination block is not selected, no action is performed.
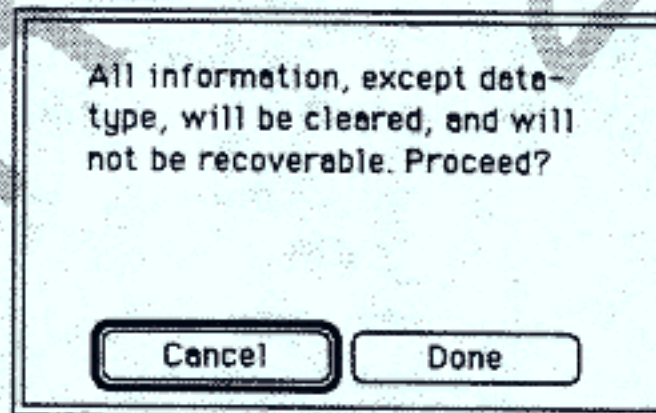
Insert

This option inserts the block that was copied by the copy menu into the location immediately above a specified block. If a destination block is not selected, the option inserts the copied block at the end of all blocks.

Clear data

This option clears a selected block. It differs from the "Delete" option in that it saves the data type. The data type of a specified block refers to information such as "the specified block is an area for sequence data". In the figure below, the arrows indicate data types.

Data type information

01	000000-000000	000000	ROMTopSys0	–
02	000000-000000	000000	Snd DRVR0	–
03	000000-000000	000000	DRVR PtrO	–
04	000000-000000	000000	Seq Vector0	B
05	000000-000000	000000	FM Data0	B

Because a data type specification is a critically important item, the following confirmation message appears. To execute the specification, click on the *done* option.

> All information, except data-type, will be cleared, and will not be recoverable. Proceed?
>
> [Cancel] [Done]

New map

This option opens a new project file. Before executing this menu, be sure to save the current project file.
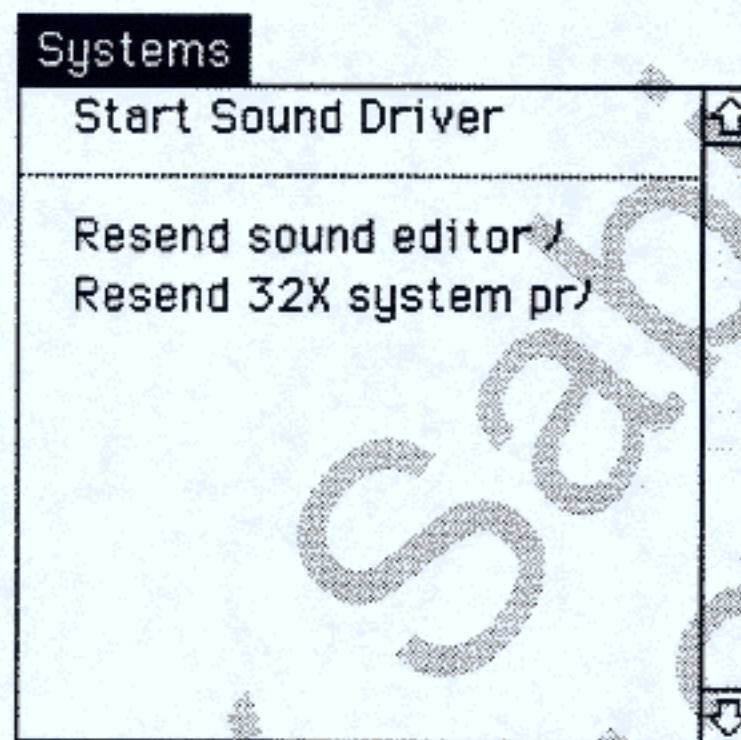
Delete map, Copy map, Paste map, Insert map

This option deletes, copies, pastes, or inserts the current map.

Clear map data

This option performs the "Clear data" action on all blocks, without displaying a confirmation message.

3. Systems

```
Systems
  Start Sound Driver              ⇧
  ................................
  Resend sound editor /
  Resend 32X system pr/
                                  ⇩
```

Start Sound Driver

This option starts the Sound Driver and generates a V-interrupt in the 32X. After loading data, be sure to start the Sound Driver.

Resend sound editor & reboo
When the Sound editor map is open, this option resends and restarts the Sound editor only. However, because the Sound editor is normally not used, this menu should not be selected.

Resend 32X system program & reboot

This option resends the system block only, and restarts the 32X.

15

4. Map

The Sound Simulator is capable of opening multiple project files simultaneously. However, the Macintosh's monitor displays only the project file that can be edited currently. The Map menu can be used to switch the files to be edited.

5. Display

When several project files are opened, sometimes it may be necessary to monitor the contents of a project file other than the current file. This menu allows the user to create a monitor window that displays the contents of non-current project files.

6. Function

```
┌─────────────────────────────────┐
│ Function                        │
│    Music test                 ⬆ │
│    SE test                      │
│    Create utility               │
│    Create flag test             │
│    Track mute                   │
│    Map selecter                 │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│    Memory configuration         │
│    Change font size             │
│                               ⬇ │
└─────────────────────────────────┘
```
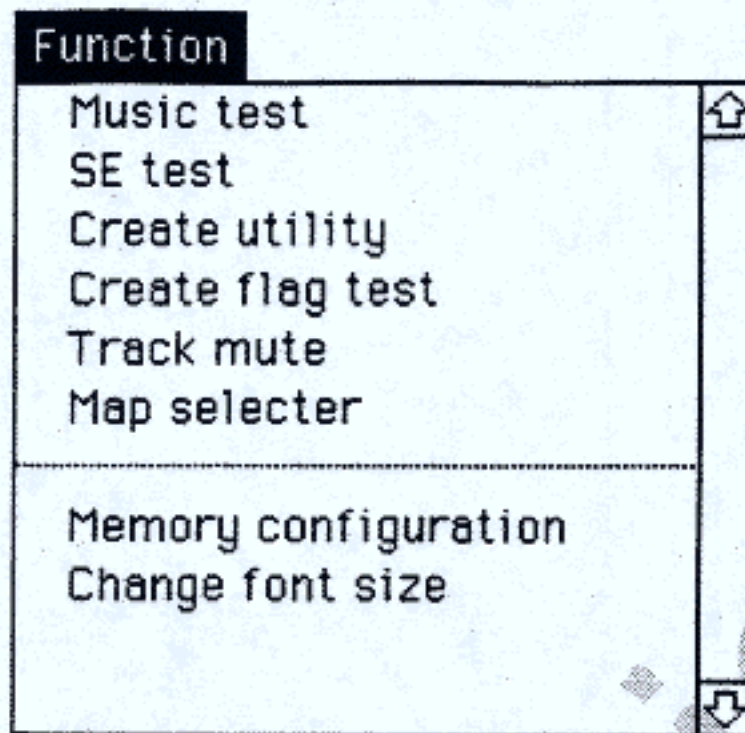
This menu sets a sound request and the CartDev memory status.

Music test, SE test, Create utility

This option issues BGM, sound effect, and utility requests. Before making a request, be sure that the Sound Driver is running. From the "System" item on the menu bar, select the "Start sound driver" option. This causes the "Set sound driver" message to be displayed on the TV monitor. If the TV monitor is connected, verify the connection.

The BGM, sound effects, and utility programs all share the same menu interface and provide the following parameters, listed from the left: identification number, request number, and song title. For a description of available requests, see the section on the Sound Driver.

```
┌──────────────────────────────────────┐
│ ▦ ▤▤▤ Music testing mode. ▤▤▤        │
│            Request List                │
│  ┌────────────────────────────────┐▲  │
│  │ 0  0x80 test                   │   │
│  │                                │   │
│  │                                │   │
│  │                                │   │
│  │                                │   │
│  │                                │   │
│  │                                │▼  │
│  └────────────────────────────────┘   │
│  ┌─────────┐            ┌─────────┐    │
│  │  Start  │            │  Edit   │    │
│  └─────────┘            └─────────┘    │
│  ┌─────┐ ┌────────┐ ┌────────┐ ┌──────┐│
│  │ New │ │ Delete │ │ Insert │ │Cancel││
│  └─────┘ └────────┘ └────────┘ └──────┘│
└──────────────────────────────────────┘
```
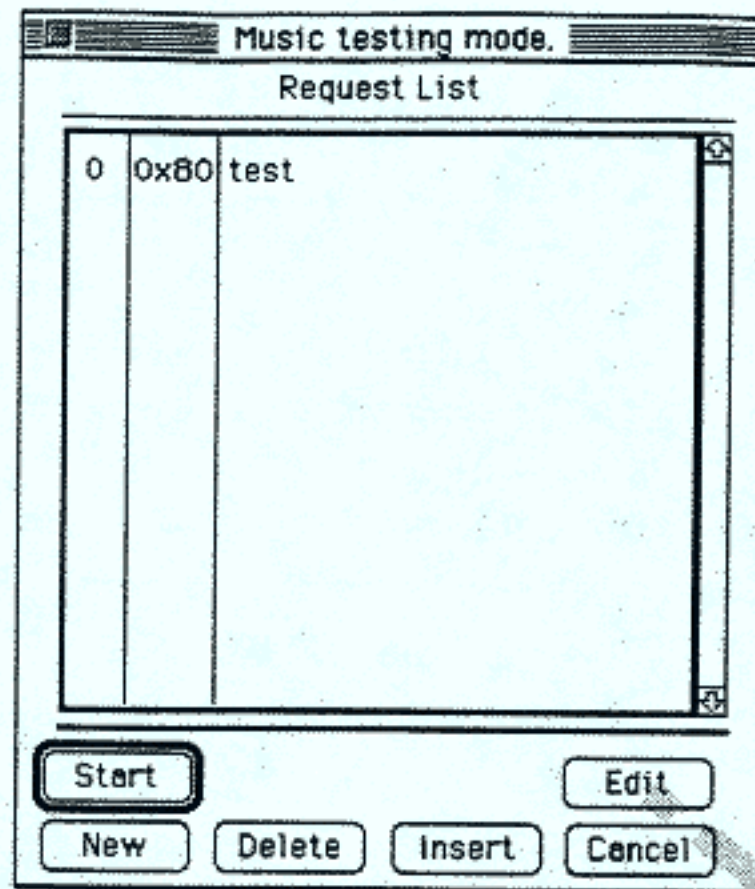
The meanings of the buttons are as follows:

Start

Issues a request code to the Sound Driver.

Edit

Changes specified data contents.

New

Creates a new data table.

Delete

Deletes unneeded data.

Insert

Inserts a new data table into a specified table.

Cancel

Closes the current dialog box while retaining the current contents. The cancel function can also be invoked from the "Close" box.

Create flag test
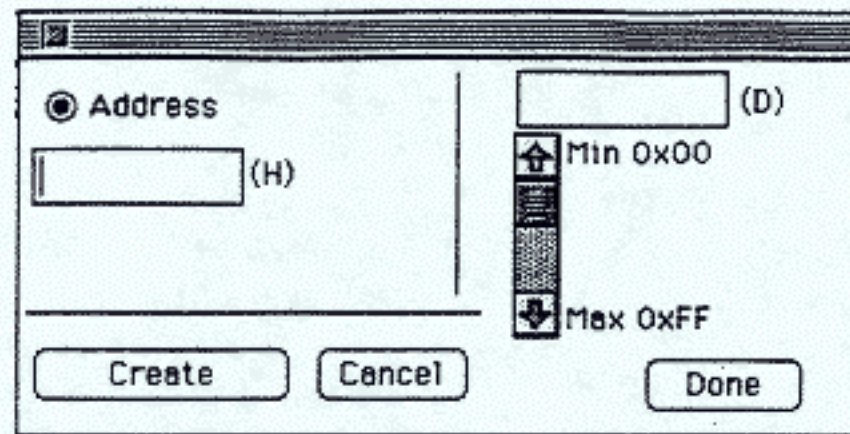
This option sets a request code and sends it to various addresses. The user can also send a request code by directly specifying an address. The "Create flag test" option differs from the "Music test, SE test, Create utility" option in that it permits the setting of an address.

Track mute

This option is not available in the current version of Sound Simulator. Therefore, this option should not be selected.

Map selector

This option allows the user to control the 68000 from the Sound Simulator.
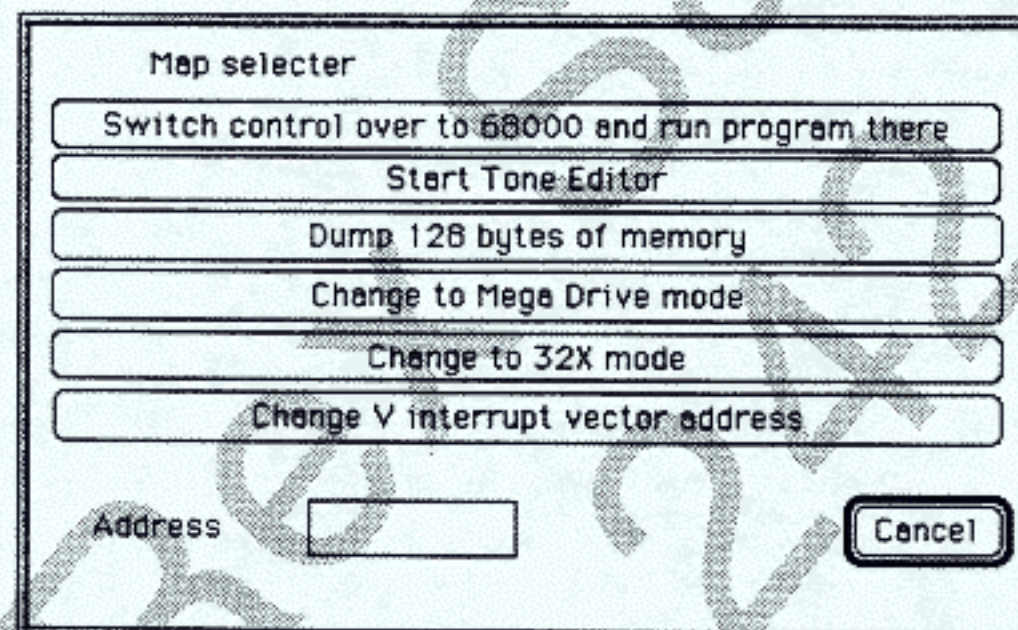
Switch control over to 68000 and run program there
Click on this option by specifying the desired address. When an address is entered, the option moves the 68000 program counter to that address. This function can be used to execute a user-generated program simultaneously with the Sound Driver, provided that the program module is loaded at the target address. See "Helpful Hints and Technical Information".

Start Tone Editor

This option is not available in the current version of Sound Simulator. Therefore, this option should not be selected.

Dump 128 bytes of memory
Click on this option by specifying the desired address. The option dumps and displays 128 bytes from a specified address onto the TV monitor.

Change to Mega Drive mode
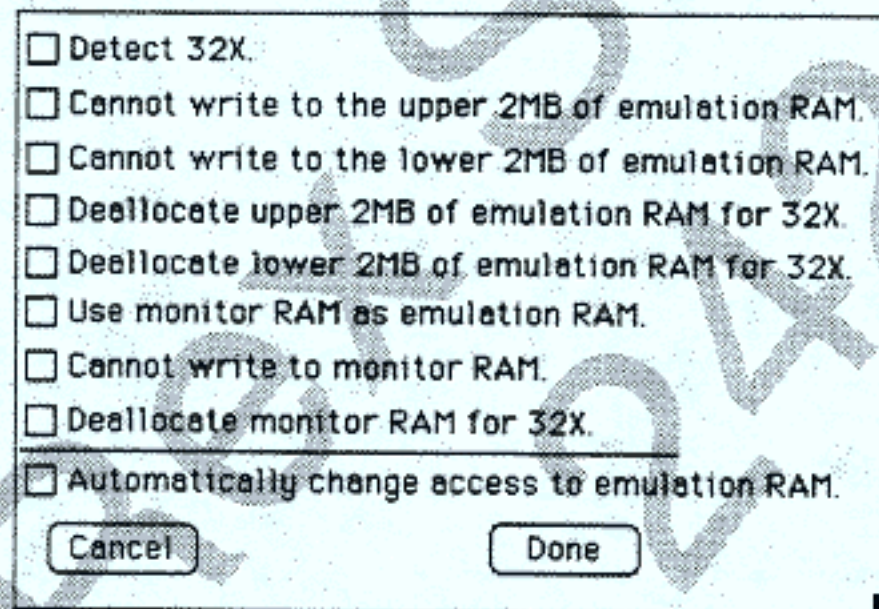This option switches to the Genesis mode.

Change to 32X mode
This option switches to the 32X mode. The mode thatis currently is on is displayed on the TV monitor.

Change V interrupt vector address
Click on this option by specifying the desired address. The option moves the V-interrupt to the specified address.

Memory configuration

This option allows the user to display and set the memory access privilege and the write-protect state that are currently in effect. For details on these items, see the "CartDev Integration Guide".

```
┌────────────────────────────────────────────┐
│ ☐ Detect 32X.                                │
│ ☐ Cannot write to the upper 2MB of emulation RAM. │
│ ☐ Cannot write to the lower 2MB of emulation RAM. │
│ ☐ Deallocate upper 2MB of emulation RAM for 32X. │
│ ☐ Deallocate lower 2MB of emulation RAM for 32X. │
│ ☐ Use monitor RAM as emulation RAM.          │
│ ☐ Cannot write to monitor RAM.               │
│ ☐ Deallocate monitor RAM for 32X.            │
│ ☐ Automatically change access to emulation RAM. │
│  ┌─────────┐            ┌─────────┐          │
│  │ Cancel  │            │  Done   │          │
│  └─────────┘            └─────────┘        ■ │
└────────────────────────────────────────────┘
```

Change font size

This option changes the size of Edit window characters to suit the monitor size and resolution.

Helpful Hints and Technical Information

- The Sound editor is not supported.

- Depending on the particular menu that is selected, the Sound Simulator prompts for an address specification. In the present tool, all addresses must be specified as ROM cartridge real addresses even when they are displayed in the 32X mode.

- In the CartDev, the following comprises the bulk of user-accessible areas: emulation RAM, the 4MB from 0x000000 through 0x400000, and dual-port RAM. Any dual-port RAM addresses can be set by the user. The initial values are 0x7E000 for the Genesis mode, and 0x8FE000 for the 32X mode. See the "Mars Cartridge Development System Board Description" for an explanation of how to set these addresses.

- When using the "Switch control over to 68000 and run program there" function, take the following information into consideration:

When the Sound Simulator is running, only V-interrupts occur on the Mega Drive 68000. When these interrupts occur, the system register contains the data 0x2500.

The Mega Drive workspace RAM that is available to users is 0x1000 bytes from 0xFF0000 through 0xFF0FFF.

- The Sound Simulator contains a built-in 32X control program and a Sound Driver. These programs can be replaced. To replace a Sound Driver, name the file for the new sound driver as either "MD_DRV.BIN" (a binary file) or "MD_DRV.S28" (a Motorola S-format file) and store the new name in the folder in which the 32xSndSim is located. When the file is not found, the Sound Simulator automatically loads the built-in Sound Driver. Any of the several sound drivers that are supplied can be loaded in this manner. Similarly, the 32X control program should be named as either "ROMTOP.BIN" or "ROMTOP.S28". Note that if the ROMTOP program is modified, SEGA will be unable to support it.

- The 68000-side space from 0x000000 through 0x007FFF is system-reserved for future use. Nothing should be loaded in this area.

Error Listings

SCSI inquiry. CardDev is not connected.

Application will terminate.

The environment will be saved and the application will terminate.

Not enough memory to open the Map Window.

Insufficient memory. Free memory for the application and try again.

Too many maps (50 maps maximum).

Too many blocks (32 blocks maximum).

The file is already being used.

An invalid file exists. The volume is not mounted.

An error occurred while loading.

Macintosh resource files cannot be transmitted by themselves.

Not enough memory to load the program.

Cannot read file.

Cannot write file.

Alias information was lost due to memory shortage. This block cannot be read automatically.

CartDev is not responding. Check all connections.

The specified function is not supported.

The file transfer failed due to a possible application error.

Cannot send to Dual-Port RAM.

Dual-Port RAM access was not restored within one second.

More than 800H bytes were received.

The job will be terminated.

22

Unknown file format.

The uncompressed data is larger than the data size that can be handled. Data not converted.

WritePtr and ReadPtr are reversed.

Bad check sum. Cannot convert file.

An error occurred while data was being received, due to a possible application error.

This file cannot be opened from the file menu.

The specified address conflicts with the sound driver. Choose a different address.

The 32X cannot access the selected address. Choose a different address.

This function cannot be used for the System Block.

This data type uses data number 0 when a pointer table is created. Therefore, the sound driver ignores the above file.

Incorrect map composition. Unable to run the map.

Unknown format for the "Receive control" program.

Cannot allocate the sound driver in the area used for bank-switching.

23